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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,683	09/18/2001	Kimiyoshi Kitazawa	0038-0363P	8538

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EXAMINER

ZACHARIA, RAMSEY E

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/869,683

Applicant(s)

KITAZAWA ET AL.

Examiner

Ramsey Zacharia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6 and 8-11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3,5,6 and 8-11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 30 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/07/2004.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07 December 2004 has been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-3, 5, 6, and 8-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection. Support for the limitations "without preheat

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treatment" in independent claim 1 and "remarkably reduced density of the edge portions" in independent claims 5, 10, and 11 could not be found in the disclosure as originally filed.

5. Claims 5, 6, and 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. The term "remarkably reduced" in independent claims 5, 10, and 11 is a relative term which renders the claims indefinite. The term "remarkably reduced" is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Use of the term "remarkably reduced" renders the density of the edge portion of the wood indefinite.

Claim Rejections - 35 USC § 102 / 103

7. Claims 10 and 11 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Arakawa et al. (U.S. Patent 6,267,920).

Arakawa et al. teach a method of compressing wood such as lumber (column 1, lines 5-22). In one embodiment, the wood is compressed against a shaping jig (column 4, lines 35-55). This jig reads on a die as claimed. A vinyl monomer, i.e. functional additive, may be used to fill cracks and vacancies on the side and end surfaces of the wood (column 6, lines 44-65). These cracks and vacancies are taken to remarkably reduce the density since the claims do not recite specific reductions in density. In the embodiment of Example 7, the flexural modulus is 12,300

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N/mm², i.e. 12,300 MPa (Table 2). Flexural modulus is taken to be flexural rigidity since modulus is a measure of stiffness.

Arakawa et al. do not teach all the process limitations recited in claims 10 and 11 such as: dry heating the lumber, forming the cracks and vacancies by wood nematodes, and using a die having male and female sections. However, since claims 10 and 11 are product claims, these limitations are product-by-process type limitations. When the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the applicant to present evidence from which the examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown*, 459 F. 2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman*, 489 F. 2d 742, 180 USPQ 324 (CCPA 1974). This burden is NOT discharged solely because the product was derived from a process not known to the prior art. *In re Fessman*, 489 F. 2d 742, 180 USPQ 324 (CCPA 1974). Furthermore, the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985) and MPEP § 2113. In this case, the resulting product of Arakawa et al. (i.e. compressed lumber having a flexural modulus of 12,300 MPa and vacancies filled with a functional additive) appears to be the same as that of claims 10 and 11. Therefore, the burden is on the applicant to conclusively demonstrate that the claimed product differs in kind from those of the prior art.

Claim Rejections - 35 USC § 103

8. Claims 5, 6, and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viitaniemi et al. (U.S. Patent 5,685,353) in view of Arakawa et al. (U.S. Patent 6,267,920).

Viitaniemi et al. teach a method for compressive shaping of wood (column 1, lines 17-26). The wood is compressed within upper and lower compression plates, i.e. compressing dies (Figure 1 and column 1, lines 49-59). Moreover, Figure 1 illustrates that the ends of the wood are not in contact with the plates and therefore exposed to air. The wood may be coniferous wood, i.e. pine (column 2, lines 59-63). The compressed wood is also heated while under compression (column 2, lines 25-32). The water content of the finished product is no more than 3% (column 2, lines 25-27).

Regarding the flexural rigidity of claims 6 and 10, from Figure 7 in the instant application it appears that flexural rigidity is a function of water content. Since the water content of Viitaniemi et al. is no more than 3%, it should inherently have a flexural rigidity of 130 MPa or more.

Viitaniemi et al. do not teach using a die having male and female die sections. However, Viitaniemi et al. is directed to shaping of wood through the use of upper and lower compression surfaces. Therefore, it would be obvious to one skilled in the art to use a male upper compression surface and a female lower compression surface (or vice versa) in place of flat plates depending on the desired final shape of the wood.

Since the wood used by Viitaniemi et al. is coniferous (i.e. pine), it is taken to have holes formed by pine weevils.

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Viitaniemi et al. teach or suggest all the limitations of claims 1-3, 9, and 11 as outlined above, except for the use of wood having holes formed in an edge portion by pine wood nematodes and the application of a functional additive to fill holes in the wood. However, Viitaniemi et al. do teach using pine, which is subject to attack by pine wood nematodes.

Arakawa et al. is directed to a compressed lumber product (column 1, lines 5-22). Arakawa et al. also teach using a vinyl monomer, i.e. functional additive, to fill cracks and vacancies in the wood (column 6, lines 44-54).

Therefore, one skilled in the art would be motivated to use as the pine wood of Viitaniemi, pine wood that had been remarkably damaged by pine wood nematodes because it would be cheaper than undamaged pine and a functional additive could be added to fill cracks and vacancies in the wood.

Response to Arguments

9. Applicant's arguments with respect to the art rejections have been considered but are moot in view of the new ground(s) of rejection.

Furthermore, regarding the rejection of claims 10 and 11 over Arakawa et al. the applicants argue that Arakawa et al. do not teach lumber in which holes are formed on an edge portion to remarkably reduce the density of the edge portion.

This is not persuasive because Arakawa et al. do teach cracks and vacancies that are formed on the side and end surfaces of their wood. While Arakawa et al. do not teach all the process limitations of claims 10 and 11 (e.g. that the cracks and vacancies are formed by pine wood nematodes), claims 10 and 11 are product claims and the determination of patentability for

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a product-by-process claim is based on the product itself and not on the method of production. Therefore, the burden is on the applicants to present evidence from which the examiner could reasonably conclude that the product-by-process limitations result in a product that differs in kind from that of the prior art.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones, can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
Tech Center 1700